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ABSTRACT

This document summarizes seven speeches on educational issues in Wisconsin. Dr. Ernest Boyer advocates recognition and reward for quality teachers and identifies developing language skills as the essential purpose of public education. Dr. Carolyn Warner defends free public education and criticizes tuition tax credits. Dr. James Rutherford urges more federal support, better training and pay for teachers, and more attention to instructional matters by administrators who focus more on leadership. Dr. Arthur White discusses the role of educators in preparing children and the public for coming changes. He cites studies on future private financial support to the public sector and future jobs. Dr. Herbert J. Grover examines competency testing; science, math, and technology education; educational finance; teacher competency; university standards; and vocational education. Dr. Richard Rossmiller discusses ways to manage school resources to improve student achievement, including school organization, classroom management, discipline, and time on task. Dr. Dena Stoner stresses vocational education at the secondary level, a component which, despite its importance, is often first to be affected by budget cuts. She urges reauthorization of the Vocational Education Act in 1984, teaching of generic vocational skills, and inclusion of vocational education as part of the regular curriculum of every student. (PB)

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IN SUMMARY

The State Superintendent's Fall Conference for School District Administrators on September 15-16, 1982 sponsored by the Wisconsin Department of Public Instruction in cooperation with the Wisconsin Association of School District Administrators once again provided an intellectual forum for the discussion of educational problems and issues of the 1980's. More than 600 school district administrators and representatives from educational organizations, teacher training institutions, and vocational schools in Wisconsin attended the two-day conference that looked at science education, vocational education, educational trends and statistics, the impact of quality teachers, and student achievement factors.

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Bulletin No. 3336

Quality Teachers

And Their Impact on Education

DR. ERNEST BOYER

"When all is said and done, the quality of our schools reduces itself to the encounter between a teacher and a student," said Dr. Ernest Boyer, president of the Carnegie Foundation and former United States Commissioner of Education. Boyer, in his address directing his remarks to the vital role of quality teachers in our education system, went on to say, "What we need to do in America is to start strengthening the profession of teaching by identifying the outstanding teachers and giving them the recognition and rewards they deserve."

Boyer drew a comparison of what is expected of the public school and thus expected of the teaching profession. He cited a Charlottesville, Virginia, survey which showed that the public expected schools to prepare students for employment, help them find a job, participate in community and international affairs, improve social and economic understanding, prepare them for marriage, teach the basic skills, prepare them for college, develop social skills, train them to think clearly, develop individuality, increase motivation to learn, and develop a sense of well being. Boyer cited this last as just a single example of "an expectation for our schools and our teachers to provide all of the services and to transmit all of the virtues."

Just One of the Partners

Dr. Boyer said that when you study the origins of public schooling in this country, it can be seen that the early public school was viewed as just one partner, and not necessarily the primary partner, in advancing young people to maturity. He said, "It is my observation that in recent years, as the home has become less stable, and as our communities have become more uncertain and less supportive, and as the churches have declined in their power and influence, we have turned to the one institution that's there day after day for all of our children, the public schools, and if they do not deliver on all points, if they fail anywhere along the line, they are vigorously condemned . . . [the schools] are assuming the obligations of all institutions and there is a desperate, although sometimes unspoken, hope that the

public schools will save America if the homes and the churches and the communities cannot."

To meet the challenges to our schools and the expectations for teachers, Boyer said it is essential that we need to strengthen the profession of teaching. He said that one way to do this is give teachers recognition and reward. "No profession can rise higher than the ability of the outstanding and gifted people . . ." He added, "This nation . . . has a moral obligation to find ways to acknowledge that there are great teachers and then reimburse them and recognize them in a thousand separate ways."

A Profession in Deep Trouble

Boyer referred to a 1980 nationwide survey which indicated that the biggest complaint of teachers was not the pay, but the public attitude toward education and the attitude of students, which are of course related to each other. "If all that the people read is critical of education, never any recognition, the next generation will become as cynical as the last," Boyer said. The survey referred to by Boyer revealed that 40 percent of the teachers polled said they planned to leave teaching before retirement and almost 45 percent said they would not enter the teaching profession if they had to do it all over again. "I suggest that's a profession in deep trouble," said Boyer in reference to the figures.

"Is it any wonder," Boyer emphasized, "that teachers . . . increasingly speak of burnout because of their discouragement over having not only to teach traditional subjects but to be hall monitors, playground supervisors, child psychiatrists, cheerleaders . . . and experts on drug and alcohol abuse. And then after doing all of this, many of our educators get unfriendly stares from students, nasty notes from parents, another master plan from the central office, and editorial condemnation from the local paper."

No Thanks

Boyer then went on to tell his audience about a story he had read in the Washington Post. That article wrote about a young former high school science teacher who left the profession and went into business for himself. The ex-teacher was quoted as saying he had five classes, four preparations, two or three evenings of extra-curricular work a week but no science equipment budget. He is now an electrician and said he has "learned that the best way to make twice as much is to fix light fixtures, not stretch the minds of children."

In another example, Boyer talked about visiting a high school and talking to students about their teachers. "How many of you have ever had an outstanding teacher?" he said. Hands went up all over. Then he asked, "How many of you have ever thanked a teacher?" Not one hand went up. After what Boyer described as an embarrassing silence, one student finally explained, "Well, you see, it's just not the thing to do."

A Signal that Matters

Boyer then offered another story where teaching was recognized. He told about several outstanding

students from a New York City high school who had enrolled at Georgetown University. When asked about their outstanding teachers, one name came up again and again. After some further inquiry into that teacher's 17-year teaching background, the president of Georgetown University called him, and said. "I'm pleased to tell you that the Board of Trustees has authorized me to say that the university is going to award you an honorary degree as an outstanding American."

"Here," said Boyer, "was at least one signal that teaching matters."

"I'm not suggesting that outstanding teachers get only token awards," Boyer said. "I am suggesting that there are thousands of ways for leaders in education to start saying good things about teachers, and that if we don't start to recognize that this is a profession to be honored, we will get what we deserve."

"We are at what I believe to be a dangerously important crossroad. I believe we will either reaffirm the value of education and save ourselves, or we continue to be uncertain and perhaps decline."

The Basic of the Basics

In addition to his concern for the greater recognition of the teaching profession, Boyer, in his address, also touched upon a concern for the place of language instruction in the public schools. He mentioned a current Carnegie Institute project which tentatively establishes four central goals for public education. He said, "I'll leave you tantalized with that, except to tell you one: We are declaring that the most essential purpose of public education is to establish the importance and centrality of language."

Boyer said that, as U.S. Commissioner of Education, he was often asked to define the basics. "I said then and I say now that language is the basic of the basics and that every student . . . must learn in the early grades, not only to read and write but to read with understanding, to write with clarity, and effectively to speak and listen."

He stated, "It is my certain conviction that language is that particular miraculous function that separates human beings from all other forms of life. It is that which makes us truly human. It is the only essential we have for formal and informal education and the success or failure of the public schools, in my judgment, hinges essentially on the confidence we give our students in the understanding and the use of language."

What's Right

About Public Education?

DR. CAROLYN WARNER

"Education is engaged in the most important single task for our nation - that of GNP - growing new people," said Carolyn Warner, Arizona's state superintendent of public instruction.

Talking about the virtues of public education, Warner went on to say, "Education is the glue that holds this entire society together. It's a vision of tomorrow; an education is the operational method of getting there. It's a kind of stewardship of believing in tomorrow and of giving of the time of our lives today."

She warned that this belief of a free public education being the hope of all futures is no longer universally held in America. "There is a growing attitude that education is OK for those who can afford it but it is not necessarily of service to society as a whole," she said.

To combat this negative attitude, Warner proposed a three-part plan:

1. Develop a philosophy, know that it is the responsibility of leaders to convert large problems into opportunities. "Problems are opportunities in work clothes," Warner quoted Henry Kayser as saying.
2. Brood creatively about purpose. Educators need to brood about their purpose and existence in the work they do.
3. Inspire people to meet difficult challenges. "Know who you are and what your commitments are," Warner added.

Reagan's Education Platform

On July 14, 1980, in Detroit, Michigan, the Reagan administration developed an education plan for his party's platform. He is the first president, Dr. Warner can recall, who has attempted to systematically implement every single point of the education plan.

The president's education platform plank called for:

1. providing a system of block grants,
2. supporting deregulation by the federal government of public

education and encouraging the elimination of the federal Department of Education,

3. restoring the right of individuals to participate in voluntary, nondenominational prayer in schools,
4. halting forced bussing,
5. enacting tuition tax relief into law,
6. halting the unconstitutional regulations against independent schools, and
7. holding the federal government accountable for its working relationship with colleges and universities and supporting deregulation to offset the rise in expenses and tuition.

A recent Heritage Foundation Report outlined the progress to date in implementing this education platform "and President Reagan is getting a B+," said Warner.

Tuition Tax Credits

Warner is concerned about the mounting effort to institute tuition tax credits for private schools which Warner says will create a dual system of education. "They are constantly eroding the confidence the public has in public education by saying it isn't any good, but it's good in private schools so try and get your kid in there and we'll get you a tax credit," said Warner.

"Every cult, kook, and 'ism' you can imagine in your wildest dreams will have had their dream come true because they can then brainwash the children of their deviltries and propagandize them and integrate it into their curriculum and their parents will have a reduced tax bill becuase they have those kids in those 'ism' schools and our country begins to crack apart at the seams and then we melt about the edges and what we knew begins to vanish before our very eyes," cautioned Warner.

"It will just be a matter of time before the federal government thru the Internal Revenue Service (IRS) steps in and asks for verification of attendance at the private school followed by rules and regulations and curriculum requirements so that the people who labored so hard for tuition tax credits will have created the monster they most deplore--a federal system of education and a public school system alongside," Warner stated.

What Needs to be Done

The task is to tell the public the truth about public education in America and to preserve it, "because what is right about it is the essence of this system of government," she added.

Warner then said, "You tell them that education is responsible for consumer protection programs, for integrating our entire society. Public education is responsible for continuing adult education, for education of all handicapped, for gifted education, bilingual education, environmental education, energy conservation education, art education, agriculture education, law education, international education, physical education, business education, migrant education, corrections education, health education, vocational education, career education, child abuse prevention, detection and reporting counseling, academic, psychological and job

counseling, competency based education, hot lunch programs, hot breakfast programs, vaccination and innoculation programs, alcohol and drug abuse programs, citizenship education, drivers education, tricycle, bicycle, motorcycle, moped, skateboard, and reading, writing and arithmetic."

Legislators also need to be educated about education since "fifty percent of our leaders in Congress--Senators and Congressmen--have been there less than six years. We have lost our institutional memory," according to Warner.

"The president needs to be more aware of the down the line implications of the tuition tax credit and be told . . . that living up to a platform plank is rare but that the plank is wrong," she explained.

The home, community, and religious institutions need to do their part in educating children, according to Warner. "We've got to tell them that kids are only in school six hours out of the day about 175 days out of the year, then they are home or someplace else. Eighteen of those hours each day, 190 days out of the year, we've got to say to parents, 'you have a responsibility, too' and to the religious institutions, 'you too,' and to the community, 'you too.'"

Warner concluded with a quote from John Wesley - Do all the good you can in all the ways you can for all the souls you can in every place you can at all the times you can, with all the zeal you can as long as ever you can. "That's our charge," said Arizona's state superintendent.

Science in Education

A Developing Crisis

DR. JAMES RUTHERFORD

Two statements by James Rutherford in his address were indicative of his theme. Rutherford, director of the Office of Science and Technology Education for the National Science Foundation, in those two statements, said, "All of our graduates need to come out of school prepared to live and operate in a world dominated, for better or worse, by science and technology."

"Are our schools preparing students for a changing world dominated by science and technology? And the answer, by any measure whatsoever, is no."

Rutherford then went on to say that the crisis developing in scientific, mathematical, and technological education in our nation is traceable in part to the lack of graduates prepared to teach science and math in the schools, with the problem compounded by the number of science and math teachers leaving the teaching profession for more lucrative jobs.

Commenting on the cause of the problem, Rutherford said there is enough blame to go around. "You're at fault, I'm at fault, parents are at fault, and schools are at fault. But the real question is, who is going to do something about it, what needs doing, and what part do each of us have to play? We are all responsible for finding a solution and doing our part. There are ample resources in the United States and we have more than enough money to do what we need to do in education when we decide to do it."

"There may be a shortage of will, and that is what I am going to talk about. I am going to suggest that there are four areas where change is needed and what form that change may take."

Keep the Federal Attention

"First, is that the federal role in education must be increased and remodeled," Rutherford said. "The federal government has to be a partner. It has to pay attention to the quality and excellence of education in this country. The national government . . . has to articulate national goals. Somebody, someplace, has to say, 'This is what we stand for as a nation.'"

"The federal government has to pay attention to teacher education. We should have national universities that are selected to produce the kinds of teachers we need."

"A nation with a national product in excess of a trillion dollars can certainly afford the quality of education that we need to survive as a nation," Rutherford explained.

Let the Weeds Grow

Rutherford's second point was that the people who run the schools - administrators, principals, school board members - pay too much attention to administrative matters and too little to instructional matters. "Most of the time, most of the (administrator's) energy is going into the peripherals. How to build a building. What about the parking lot? Attendance records." Rutherford went on to say that the heart of education is "what do you want people to learn? What does society need in the next 20, 30, or 50 years? How can we meet the need?"

Rutherford told the district administrators that they should be examining the curriculum from top to bottom. "The content of public school education is where the attention is needed. It needs it now and it needs it by you. Put your attention on the fundamental issues of what is appropriate for learning and let the weeds grow in the parking lot."

Teaching: The Important Thing

Rutherford's third point concerned the issue of training and keeping good teachers. "Nothing else will work, however good the curriculum and however good our purposes, unless we make teaching into the important thing it is." He said that salaries are not the only determining factor in getting and keeping the kind of teachers needed. "Teachers should have a way of life that is appropriate to their level in and importance to society. But they also need a good instructional climate, they need technical support, people to help in the laboratory, people to help with typing. There is no more reason why teachers should do that anymore than you should clean your own office or type your own letter."

Rutherford then said that schools lag behind in using the technologies available for the instructional process. "The history of American education is that we rarely get in on the technologies and when we do, we get in late and don't use them well."

"Teachers themselves have failed to exert the intellectual leadership that it takes," Rutherford said. "Teachers go along with you and your counselors in rules like the following: You can't take physics unless you've had chemistry. You can't take chemistry unless you've had biology . . ." He added, "Teachers must say, 'We care about science and physics and chemistry and mathematics and history and art and culture and here's how we think it all ought to fit together.'"

Leadership: The Way it Should Be

Rutherford's final point involves the issue of leadership which he said, is something everybody always

wants except when it is directed at them. He told the administrators, "You should stop thinking of yourselves primarily as managers. Hire a manager. Spend your time working and thinking and arguing about the structure and fabric of knowledge . . ."

Rutherford said that administrators should not be in the business of simply administering current operations. "You have to get into your systems a personal sense of what education should be so that you can then provide leadership to the faculty, the school board, to the community. You don't say to them, 'What do you want? I'll do it.' You say, 'Here's what ought to be, this is what we need.'"

Rutherford concluded his remarks by saying, "We want to build for the future and in order to do so, we've got to enhance teaching, we've got to deal with content and substance. We have to see more leadership than what we've been getting from people who operate our schools . . ."

REACTIONS

Reacting to Rutherford's remarks were Nancy Noeske, consumer affairs director for the Wisconsin Electric Power Company; Douglas Johnson, president of the Wisconsin Society of Science Teachers and physics teacher at James Madison Memorial High School, Madison; Louis Birchbauer, superintendent of the Mosinee public schools; and George O'Hearn, science education professor at UW-Green Bay and director of the Center for the Advancement of Science Education.

Nancy Noeske

Nancy Noeske, consumer affairs director for the Wisconsin Electric Power Company, began her remarks by saying that Wisconsin Electric and other utilities are "really dependent today on the ability to hire people with backgrounds in engineering sciences and technology at all levels." Future needs at Wisconsin Electric call for 13,000 new positions to be created in the next ten years with the start up of new power plants, both coal fired and nuclear, she said.

Noeske then talked about the private sector initiatives. "Now is the time for demanding corporate social responsibility from the private sector. Business does want to show that it has corporate responsibility. It wants an opportunity to be a partner with government, schools, with whatever group there is, but they want to be a part of it--not just offer advice--but be part of it," Noeske emphasized.

She urged the school district administrators to look to the private sector to become partners with them. "Let's not look towards the federal government. The federal dollars fade in and out. The businesses in your community, for the most part, are there to stay."

Noeske agreed with Dr. Rutherford's remarks about the crisis in science education. "I think we need to look

at the quality of our teachers and the quality of the decisions being made at the local and state levels as well as at the national levels."

Noeske concluded her remarks by calling for more program accountability. "It behooves all of us to look for that accountability and to look for partners who can help build and change our direction so that we can say that our system has not failed. If we are partners in it, then we all have to accept the responsibility and I don't think enough of that is happening in our local communities."

Douglas Johnson

Douglas Johnson, physics teacher at James Madison Memorial High School, Madison, believes science teachers should be allowed to be more creative and receive more administrative support for professional growth activities.

"I have gone to conventions and have listened to people who have creative abilities," said Johnson. "These creative ideas are coming from other teachers."

Johnson encouraged the administrators to allow their science teachers to grow professionally in the hopes of improving science education at the district level. "Speaking as a representative from the Wisconsin Society of Science Teachers, I feel that professional activity, even if it is only going to conventions, even if it is only now and then, can help a lot because you get caught up in the spirit. You hear people who have been creative and who have solved some of their problems."

Louis Birchbauer

As the district administrator for Mosinee Public Schools, Louis Birchbauer posed some concerns that administrators face as they return to their districts.

He noted that Dr. Boyer encouraged administrators to concentrate on language, reading, and communication while Dr. Rutherford said science development should be emphasized. "I think that puts administrators in very difficult positions because they are a balancing individual within the community," explained Birchbauer.

Another concern of Birchbauer's dealt with ways to convince local taxpayers and others that additional dollars have to be there. "Unity to reach a common goal or more appropriate student education in the world as it now exists--that's a challenge that must be accepted by taxpayers, industry, parents, teachers, universities, and superintendents."

George O'Hearn

George O'Hearn, science education professor at U.W.-Green Bay and director of the Center for the Advancement of Science Education, referred to Dr. Rutherford's four main points.

Rutherford called for national support and assistance for science education. "We need some assistance on a national level to find programs that work in schools. We need some information flow," agreed O'Hearn.

Rutherford also called for a reexamination of the content and purpose of science education. "I support this reexamination wholeheartedly," concurred O'Hearn. "Let's look at graduation requirements, the content and purpose, and our expectations."

"Seventy-two percent of the districts require only two years of science--frequently at ninth grade, plus biology. Some districts specify nothing, and in some districts it can be home economics or agriculture," O'Hearn continued.

"The good news is that many of the districts are moving toward increasing the requirements. I believe about a quarter of the districts are already involved in raising those requirements," said O'Hearn.

Rutherford's third point dealt with rethinking the content and purpose of education and the need to look at standards. "Indeed, we need to have time to look at the curriculum. We need to have our universities do something for retraining teachers," continued O'Hearn.

Rutherford's fourth point focused on learning and leadership. O'Hearn cited the Niagara and Wausau school districts as examples of responding to good leadership. "Those are models that I think we ought to look at," O'Hearn said.

O'Hearn concluded by talking about plans for a program similar to Business World called Science World "that would bring a fairly large number of young people, junior high age, and their teachers together for about a week or so of intensive work with science, industrial scientists, academic scientists, and computers."

National Trends

And Their Impact on Education in Wisconsin

DR. ARTHUR WHITE

Arthur White defines the crisis in American secondary education as "needing to prepare our children for the changing America in the 1980s from what it was a generation ago." White, a partner in the opinion research firm of Yankelovich, Skelly, and White defined those changes in terms of demography, economics, America's international position, and values.

State of the Nation

White began his address by talking about how President Reagan was elected. "Our studies in the fall of 1980 showed that six out of ten people in this country said they didn't like either one of the presidential candidates. Only one out of four who voted for President Reagan was voting for his policies and programs; three out of four were not. Most of them were voting against Mr. Carter, not for Mr. Reagan's point of view," White said.

Now two years later, seven out of ten Americans say they like Ronald Reagan and they respect him, but well over 60 percent say they think the country is in deep and serious trouble. "Thirty-five percent are concerned about the economy--both the unemployment part of the economy and inflation. The economy is the problem that comes up most often," said White. Next are concerns about national problems and the nuclear issue.

Demographic Changes

"In the 1950s, nine Americans were working for every one that was on a pension or on Social Security. Now there are three working and one on Social Security or a pension and that is going down to two to one by the 1990s," said White.

Another demographic change is the movement towards smaller families in America. "In the 50s and even into the 60s, three out of five voters were parents of children in secondary schools. Now that's down to one out of five voters," continued White.

Economic Changes

At the end of the 1970s, "whites in this country had neither gained nor lost, but those who are colored lost about five percent in terms of their economic situation compared to the beginning of the 70s," White explained.

The rate of growth of productivity in the country and the perception of America's ability to produce and share with others has also changed according to White. "There just is a feeling that somehow we've lost our magic and that is a very sobering thought."

Change in International Position

"When the United Nations was formed, we were it," said White. "We were there, we were forming it. We were the ones who everyone looked to for leadership and strength and we had it. Now in the United Nations, we often are voting alone or are rarely in a position to get a majority. That's a big change."

Change in Values

When Americans were asked how they wanted to live their lives, the majority (70-80 percent) used to say they were going to marry and have two children, save for their education, and hope that they would live better lives than their parents. White says that's changed now. "They feel they have a right to live their lives. They feel that they can and will do certain things for their children but they're willing to do less. And they feel much more concerned about wanting to have their own rewards earlier in life and in more substantial ways."

Attitudes towards employers are also different, according to White. "The old idea of loyalty and tradition and long service to one employer is no longer there. It doesn't mean nobody feels that way, but where as three out of four used to be in this traditional mold, now it's closer to one out of four."

White cited a study his firm did for John D. Rockefeller, III, on the changes in American thinking. The study showed that young college people held values "much harsher and more different than we have now because they really don't want to work in traditional ways at all. They say they'll take jobs in industry and business but on their terms. What American people want to give to their community and their government is different than it used to be. Not totally, but in large numbers."

More Control

He said Americans want the control President Reagan promised them. "In the marketplace, they are trying to eliminate the middle man in large numbers. One reason banks are having so much trouble in this country is that people are trying to go to money funds and get their money into situations where there isn't a bank middle man."

Traditional retailers are also having trouble because they are unable to go beyond what they are able to do. "The traditional service of retailers is not as highly valued as it used to be," observed White.

Communications Paradox

White defines this paradox as "being so selective in what we're willing to listen to and accept from these various communications channels that we're more blind and deaf and insensitive about some of the major things than we have ever been."

White cites "refusing to face up to the realities of the federal budget"

as an example of this communications paradox. The Committee for a Responsible Federal Budget representing former federal budget directors, former secretaries of the treasury, and others are concerned "that unless Americans face the problem of the defense budget and the entitlements, we're not going to be able to get ourselves into fiscal health in our lifetime. They are seriously concerned and this affects all of us. We're not listening."

White described the crisis in American secondary education as needing to prepare children for the future as another example of refusing to face reality. "All the new jobs are in service industries; manufacturing is declining. This has all kinds of implications for how we're going to train children and how they're going to be able to really live their lives fruitfully in terms of economics at least, in the period ahead."

Role of Educators

White suggests that educators can provide a kind of awareness, familiarity, positive attitude, and supportive behavior to the American public about secondary education by:

- providing a quality educational system
- addressing the role of the family and the schools "in coming to grips with some of the problems that stand in the way of children receiving your eduational product"
- preparing a professional, comprehensive communications program
- accepting the changes that White is describing and recognizing the accomplishments of the educational community
- helping the American people to become better citizens to support the public schools. "We've got to get them paying attention, as a right of being in this c[illegible], to the needs of public [illegible]ets and the need to support [illegible]ools."
- encouraging corporate involvement.

Other Studies

White's opinion research firm recently completed a study for the Council on Foundations which showed that two out of three of the 219 companies surveyed said they expect to provide more financial support to the public sector. The survey also showed that higher education is the area that has, in the past, received the greatest support. "Secondary education meets all the criteria that higher education does and you can't get into their education without having a good secondary education. I think you have a big opportunity to work with corporations in this period to get them to do more. They can't make up the financial gap but they can give people, things, money, and participation," said White.

White described another study--this one looking at future jobs in Wisconsin. David Birch, an MIT professor, is preparing a futures jobs forecast for every Wisconsin community. White's research firm will then talk to businesses in the community to determine the skills and educational background needed to fill these future jobs. Corporate and educational leaders will then be asked what they need to provide the necessary education. A program will then be designed to "get the schools in a position to meet the new needs," concluded White.

Partnerships

In Education for the 80's

DR. HERBERT J. GROVER

State Superintendent Herbert Grover announced major initiatives in vocational education, teacher education, and science and math education at his fall conference for school district administrators, but before talking about those initiatives, he set a theme of optimism and challenge.

Grover told the administrators, "We want you to come out of this conference with new vision and new hope and new commitments, new dedication, new perseverance, and new optimism."

He reminded them about the importance of education. "Make no mistake about it, there is no institution in our land that more generally reflects the condition of our society . . . You see, we are so close to the public and public expectations that we mirror the values of those out there in the adult population."

While acknowledging criticisms directed at schools, Grover said education is responding to its perceived shortcomings, and that the public shares in the problems it sees in education.

View Criticism as an Expectation

"As you work out there in your communities and you are a little hypertense because you do hear criticism of the enterprise," he said, "I think that you ought not to view that criticism as one of alienation, but rather one of expectation. The people of this great state have not lost their confidence in the public elementary and secondary schools."

"Do not underestimate the confidence and the understanding and the intellect of the common people of this great state as they commit to the common school and all that it means for all of our children. We're a unique society . . . We're so diverse, we're so different, we're so culturally pluralistic, we're an admixture of culture gathered together here in this great United States of America, and we find common bonds and common opportunity

and the reinforcement of a great public commitment that any child, regardless of heritage, of race and of color and of creed and of national origin and of wealth of parents, can find opportunity and can find personal growth and can participate in this great democratic society of ours. And they find that common opportunity in our public elementary and secondary schools. Make no mistake about it, the common sense of our people of this state recognizes that fact."

Agenda Questions

"And we need to bring [our public] in now and engage them in helping us be better." Grover continued, "You know as our state and national economy have slowed down during the past few years, public education has come under close scrutiny since it really is the single largest public investment. And so in the Department of Public Instruction, we are asking ourselves certain questions as we try to find the agenda for public elementary and secondary education in this time of massive societal changes:

- What services beyond the curriculum should public schools provide?
- What are the components of an educational curriculum in the 1980s?
- Should job training and skills exposure be a responsibility of the public schools?
- Should the public schools continue to be financed heavily through the property tax?
- What alternative delivery systems should support the public schools in their educational mission?"

In raising those questions, Grover stressed partnerships - partnerships between the state and the local school districts, with parents and taxpayers, with the VTAE system and the university, and with business and industry.

Competency Testing

"We have initiated the competency testing partnership," Grover told the administrators. "We will be explaining how well we have moved academically and intellectually and organizationally in the department to get this program moving." By January, the DPI will identify participating districts in the voluntary program.

The state superintendent spoke of the importance of competency testing and said the department will develop a model program. But for those districts that don't want to engage in the state program, he said, "We don't mind if you plagiarize. Do it in your district. Do it with your own genius. If you decide that you don't want to be in the state program, that you have a better plan, then make that work."

Science/Math/Technology Initiatives

Grover discussed key provisions of a still-evolving initiative in science, math, and technology education. The initiative's thrust is to improve the quality of science and mathematics education.

"We propose," Grover elaborated, "an industrial internship for science and math teachers for periods of two months in the summer with our partners in industry seeking funds from the affected industries."

"And we are going to develop for you for your own perusal and your own adoption a model K-12 science curriculum," he promised. "We will be encouraging school districts to have high standards for young people in the secondary schools in terms of science requirements for graduation."

Summer Science World

"We propose, and hope to find the funding for, a summer Science World like the Business World (that was begun this year for high school students and teachers) . . . and we propose tax incentives for business; legislation will be introduced to provide a state tax incentive for individual businesses and industries that provide resources to science, math and technology education. Such resources will include human expertise, donated equipment, and financial contributions that will be given to accredited schools."

Grover also indicated that CESAs would be used to provide shared instruction in science for districts that are unable to employ their own science teachers.

Fees Criticized

The State Superintendent was critical of the growing practice of charging fees as a means of generating additional operational revenue in schools. "I'm concerned about what we're doing out there in terms of students fees and rentals of books, and some of those other things. I caution you people that the common school is for everybody, free public elementary and secondary education is for all of our children - not free to society but free to the child . . .

"Be reminded of the words of our President John Adams, who said, 'The whole people must take upon themselves the education of the whole people and be willing to bear the expense of it.' Watch it; that isn't the way to go. Thirteen million out of $2.4 billion is way less than one percent. The harm far exceeds the benefit. I'd rather have a higher tax rate," said Grover.

Referring to the broader financial picture, Grover acknowledged that the "last session of the legislature and our governor treated us very well."

But, he cautioned against overreliance on the property tax to fund education. He said, "We cannot take inproportionately from a segment of our private sector economy, for a segment of our people who happen to own property as opposed to other measures of wealth in our society."

"I can tell you this: that all of us together in the partnership must make the case that overdependence on the property tax for the public elementary and secondary schools will ultimately be extremely harmful."

Teacher Competency

Grover announced formation of a task force to study teacher education in Wisconsin. The task force will be headed by Paul Hassett, president of the Wisconsin Association of Manufacturers and Commerce.

"We need to have our finest minds in our finest profession if we are going to cause our young people to

happen in our schools," he said. "So we're going to ask: What can we expect of Wisconsin's teacher supply and demand picture and what will it look like over the years between now and the year 2000? What are the implications of the emerging technology for the initial preparation and continuing professional development of teachers? What can we do to attract the finest minds to teaching and the educational professions? How can we assure rigor and quality in teacher education? How can we best utilize our most effective and most skillful teachers? How can we make the field of teaching significantly attractive and retain competent individuals in the profession?"

University Standards

In talking about public elementary and secondary education's partnership with the university, Grover said, "There is no doubt that we are dramatically intertwined and mutually dependent upon each other. They get our end product and we teach with theirs."

He said for too long, as a member of the University of Wisconsin Board of Regents, he has been frustrated with the amount of money needed for remedial basic skills programs in the university. "I think that open admission has something to do with it. I mean you can get into some of our higher educational institutions in the state without having to take a math course."

Because he does not favor jeopardizing access to the university by the disadvantaged or late bloomers, Grover said, "So we try to find a half-way solution. A solution that kind of splits the issue and gets our young people to think more about their own personal growth and development in the secondary schools."

To deal with the situation, Grover said, the university and Department of Public Instruction formed a committee to develop a statement on college preparation that can be used by parents, guidance counselors, school boards, and administrators in advising college-bound students on what kinds of things they ought to engage in to be prepared to compete in the university environment.

Vocational Education

Grover also underscored his past commitment to improving both the focus and content of vocational education. Observing that schools are the largest providers of employees to the job market, he called for development of a vocational education partnership with the state vocational education system, business and industry, and, through the DPI, local school districts. Citing a recent study by the Department of Industry, Labor and Human Relations, Grover said there will be a severe labor shortage in areas of skilled employment by 1990 unless students in school today are trained to meet the needs of the job market.

"There is no simple response to how we get young people exposed to where the job potential will be," he said, "As we meet that critical necessity in our public elementary and secondary schools, first of all make no mistake what employers want. They want students who have a thorough knowledge of writing, reading, mathematics, science, problem-solving, and critical thinking. And that is our primary mission."

"Our schools must change," Grover asserted. "We must become more scientifically literate as a people, and we must change our curriculum to complement those needs in our schools."

"There ought to be a state commitment for access for all children to comprehensive vocational education, with appropriate occupational training and supervised work experience."

Real Job Training

"Now what do I mean?" he asked. "Vocational educators remind me that first of all we have to tell young people where the jobs are. Vocational educators remind me that we have to talk about job exploration, the job of showing young people all of the varying opportunities that are out there for them. In certain instances we will also have to address work study and real job training. In that sense, we are pleased with the vocational system. It has responded to the law as we've set aside a million dollars to try to gain access to some of the lower level programmatic offerings that our young people - our 16 to 18 year olds - can definitely handle . . ."

The relationship with business and industry is improving, Grover said. "We have softened the relationship with business and industry in this state. We cannot stand aside from their needs thinking it will pass . . . They know what the needs are and they intend to get engaged in public elementary and secondary education. I think that's wholesome. I believe in it."

Assessing the current status of vocational education, Grover contended the need for change is obvious. "What is our condition now? Clearly when you get down to it, about 80 percent of the kids that are in our vocational programs are in home ec. or voc. ag. You know it must be much more than that as we talk about the technological age and the training that is to take place in our schools.

"And so we seek a partnership," he said, "with the vocational system and with business and industry. We are going to redefine secondary voc. ed. and we are going to share that with you and build with you in a partnership fashion comprehensive vocational educational opportunities for all children if they decide to exercise that hope."

Managing School Resources

To Improve Student Achievement

DR. RICHARD ROSSMILLER

"One of the most intriguing questions that confronts researchers, administrators, and other educators today is how to use the human and material resources that society makes available in the most efficient way in the production of education," said Richard Rossmiller, chairman of the Department of Educational Administration at the University of Wisconsin-Madison.

Rossmiller first became interested in the linkages between resources and student achievement when he undertook a study to determine the added cost of providing appropriate educational programs for the handicapped for the National Educational Finance Project from 1968-1972. He continues to study the resources/learning relationship as it affects all students today.

Rossmiller reported that he had also served as expert witness in several of the state's school finance cases in recent years. Plaintiffs in these cases typically claim that the low per-pupil expenditure in their child's school districts, as compared to others, denies the child his or her constitutional right to equal educational opportunity. Providing expert testimony on this question has required a continuing awareness of the findings of other researchers as well.

Which Resources Make a Difference

"Which resources, if any, make a difference?" Rossmiller asked. He reported first on those that have been found to have limited effect on student achievement.

Rossmiller said that there is no solid research evidence establishing, beyond question at least, that the achievement and personal development of students are related to the amount of money spent per pupil in a district or in a school, at least at the levels of spending typically found in this country. It is the specific resources purchased and the use made of them that are important in accounting for differences in student learning outcomes.

The evidence also indicates that the quality of the school physical plant is not an important determinant of student learning. This does not mean that adequate facilities are unnecessary or unimportant, but within the range of quality found in American schools, the nature of the facility seems to be of only limited significance.

While Glass and his colleagues have argued that a reduction in class size does lead to improved academic achievement for students, the research does not permit an unambiguous response to the question "What

is the best class size?" The answer depends upon the natures of individual students, the subjects being taught, the instructional modes, and perhaps other factors.

School Organization Controversies

"There aren't many debates that have produced more heat and less light than those about how schools should be organized," Rossmiller continued. The controversies over the mainstreaming of exceptional children, self-contained versus open classrooms, middle schools versus junior high schools, and heterogeneous as opposed to homogeneous grouping go on endlessly. There is no persuasive evidence at this time, however, that a single organizational structure is clearly superior to all others, at least with regard to its effect on student achievement."

There are some variables however, Rossmiller stated, which can be said to affect the learning of students on the basis of research findings.

There are strong indications that, other things being equal, student outcomes are somewhat lower in schools with a high percentage of minority, socially disadvantaged, or intellectually less able students. A study of secondary schools in inner London found that the variable called "academic balance," which referred to the relative proportions of intellectually able and less able students, showed stronger and more consistent association with pupil learning than any other measures of the student body. Similarly, Summers and Wolff, using data gathered in Philadelphia, found that academic achievement was higher than otherwise would be expected in schools with a large percentage of high achievers in the student body.

Interpretation of findings about the significance of the composition of the student body is of course complicated by the fact that schools in which there is a large percentage of disadvantaged children frequently differ from other schools in many other ways. It is also clear that student body composition, while appearing to affect learning outcomes rather consistently, is not the only or even the most important factor accounting for variance in student learning.

Effective Teachers Hold Attention

Rossmiller stated that student learning has been found to be strongly influenced by the way in which teachers manage their classrooms. An effective teacher is able to gain and hold the attention of students and selects techniques of instruction appropriate for the learning objectives established.

Good teachers spend a high proportion of time interacting with the class as a whole and a high proportion of time on subject matter as opposed, for example, to setting up equipment or handing out papers. Lessons begin and end on time. There are few disciplinary interruptions, ample use of praise for accomplishment, unambiguous statements of what is expected, and timely feedback on performance.

Discipline is Crucial

Discipline is also crucial. Effective classrooms are characterized by order, by an appropriate reinforcement of rules, and by purposeful activity. "The type of discipline I refer to does not necessarily imply punishment," Rossmiller said. "In

fact, too much punishment may aggravate disruptive behavior. Effective discipline focuses attention on the academic task at hand and maximizes the on-task performance of students."

Closely related to good discipline is the creation of an atmosphere in which a majority of the pupils are willing, indeed eager, to participate in the work of the school. Giving students opportunities to actively take part in planning and conducting activities is one way to bring this about.

Similarly, effective schools are characterized by high academic expectations on the part of the staff, staff participation in planning of the curriculum, adequate supervision to insure that teachers follow agreed-upon practices, regular assignment and grading of homework, and a high percentage of time devoted to active teaching.

Rossmiller noted that some of the research being described suggests that the ways time is used in schools may have a significant effect on the academic achievement and personal development of students. He reported on a current study in which he and other researchers are examining the relationship between the use of various resources, including time, and the cognitive and affective outcomes of schooling as demonstrated by students.

Time-on-Task Studied

For this study, students in the third grade in 1979-80 at four Wisconsin elementary schools were followed through the third-, fourth-, and fifth-grade school years. Two of the schools served medium-sized urban communities, the other two, small-town or rural areas.

The students' academic progress was assessed by giving them the reading and mathematics portions of the Stanford Achievement Tests and self-observation scales were used to provide some measure of their affective development. The results indicated that the students were quite similar on more measures and could be considered to be reasonably representative of elementary school students in similar districts throughout the state.

Each student was observed in the classroom at two intervals throughout each of three school years, and for three days during the year, typically in the fall, the winter, and the spring. The classroom observer recorded the subject being studied, the mode of instruction being used, and whether the student was on or off task or engaged in some type of process behavior.

Time on task, which represented the time a student was actively engaged in learning, was categorized in one of five modes of instruction: independent study; one-to-one activity with an adult -- a teacher, an aide, or a volunteer; small-group activity with an adult, typically the teacher, and a group smaller than the entire class; large-group instruction with the teacher and a class-size or larger group; and working with other students without an adult.

In addition to on-task time in one of the five instructional modes, student time was classified in three other categories: process time; off-task time; and nonobservable

time. Process time was spent in transition from one activity to another, in waiting for or receiving instructions, in correcting test papers, or in other mechanical, rather than learning exercises. Off-task time is self-explanatory. The nonobservable category covered periods when the student had left the room or wasn't in sight of the observer.

Preliminary Results Reported

Analysis of data on the students' use of time and the relationship of use of time to academic achievement is far enough along to share some of the preliminary results, Rossmiller reported.

The amount of class time spent on academic subjects - reading, math, language arts, social studies, and science - dropped from an average of 210 minutes per day for third graders to 178 minutes per day for fourth graders and further to 154 minutes per day for fifth graders. Given the current "back to basics" emphasis, this may be significant, Rossmiller suggested. If in fact these data are indicative of what is happening in Wisconsin elementary schools generally, less time is being spent on instruction in the academic subjects at each progressive grade level.

The study found two instructional modes predominating: large-group instruction and independent study. The small amount of time devoted to small-group instruction during the third-grade year declined progressively over the fourth- and fifth-grade years. Very little time was devoted to either one-to-one instruction or to work with other students in any of the three years.

It was somewhat disappointing, Rossmiller noted, to find that the average third grader in the four schools studied was on task only about 74 percent of the time; 34 minutes per day were spent in process, and 21 minutes per day off task. The average fourth grader was on task about 77 percent of the time, 21 minutes in process, and 20 minutes off task. In the fifth grade, the average student was on task 78 percent of the time, 18 minutes in process, and 16 minutes off task. It was encouraging, however, that the percentage of time on task increased over the third-, fourth-, and fifth-grade years.

The off-task time remained fairly straightforward each year and the amount of in-process time even decreased. Nonetheless, the amount of time lost to in-process behavior suggests that this is an area where principals and supervisors could be helping teachers to improve their classroom management skills.

Given these findings, the next question to ask was, "To what extent does the amount of time students are on task account for variance in their academic performance. How important is it in explaining test score results, for example?"

In the study in which Rossmiller is involved, multiple regression analysis was used to examine the relationship between reading achievement test scores and the time students spent on task and in process in each of the five academic subjects. The time usage categories accounted for 20 percent of the variance in reading scores for third graders, 24 percent of the variance for fourth graders, and 12 percent for fifth graders. For mathematics achieve-

ment, the time use categories accounted for 20 percent of the variance for third graders, 25 percent for fourth graders, and 16 percent for fifth graders.

No Clear Pattern Has Emerged

No clear pattern emerged but from 15-20 percent seemed to be the largest correlation factor likely to be obtained from the overall sample. The way the time of a student is distributed among the instructional modes is probably a better descriptor of the student than a predictor of the student's academic achievement, Rossmiller reported.

The study also separately analyzed students in the bottom quartile, the middle half, and the top quartile in reading achievement scores using only the data for their time on task in reading. The time usage categories were much more useful predictors of reading achievement scores for students in the lowest quartile than for those in the middle half and in the upper quartile. They accounted for 55 percent of the variance in reading scores for third-grade students in the lowest quartile, 27 percent for fourth-grade students in the lowest quartile, and 73 percent for fifth-grade students.

In contrast, time usage categories accounted for only 8, 6, and 16 percent, respectively, for third, fourth, and fifth graders in the middle half of the distribution. For students in the high quartile, the comparable percentages were 12, 14, and 16.

Rossmiller's group also looked at one regression with the bottom, roughly five percent of students, and found that time on task was a very important predictor of their achievement. Over 90 percent of the variance could be accounted for using the information on time on task. Time on task proved to be a poorer predictor of mathematics achievement scores than of reading scores for students in the low quartile.

While admitting that generalizations on the basis of the preliminary results must be cautious ones, Rossmiller felt they indicated that time on task, though important, did not provide an explanation for the educational problems of all students. It did account for quite a bit of variance, however, in the educational achievement of students in the lowest quartile, those having most difficulty in school.

Additional Data Collected

Rossmiller and his colleagues have collected additional data on background and personal characteristics of teachers and students including information from parents and guardians of students. As the study continues, they hope that analysis of these factors will contribute to a clearer understanding of how material and human resources interact to influence student achievement in the three elementary grades being examined.

Do resources affect student learning? In summary, Richard Rossmiller described his answer to that question as "a resounding and unambiguous maybe." Resources are important, but it is the management of resources that is crucial. Whether or not they are used effectively depends upon the principals and teachers who are at the cutting edge of the educational process.

Importance of Vocational Education

At the Secondary Level

DR. DENA STONER

"Do vocational educators in the public schools want to be followers or leaders in the last 18 years of this century?" challenged Dena Stoner, director of appropriations, budget, and intergovernmental finance for the National School Boards Association. The facts and assumptions shaping the current economy indicate that productivity in this country must be increased. Educational requirements for the average worker, therefore, are about to undergo major changes.

Does this mean that every child that comes out of the K-12 system in Wisconsin must know how to program a computer? "No," asserted Stoner, "It is not that simple. In fact, there is increasing reason to believe, as one looks into the future of the technological revolution, that high tech will claim only about 10 percent of the total work force, in manufacturing industries in particular, while other workers will be reduced to dealing with only three buttons: stop, go, and call the expert."

Worker/Retiree Ratio Narrowing

One economist feels the work force and society could become even more stratified than they are now. The information-rich and information-poor could become the economically rich and economically poor as well. Given this scenario, and a work force-to-dependent ratio that is down from the nine-to-one of post-World War II to two-to-one in 1982, interesting questions arise about the role of education, and particularly vocational education, in preparing the two workers who will support each of us in our old age.

"Educators must not ignore these questions. The institutions of which they are in charge can take the lead in restructuring education for the future, or they can become slavish followers of business and other concerns who will simply instruct them in which skills they want schools to teach next," Stoner added.

In the latter case, according to Stoner, something important could be lost in this democratic society. Schools have an important, independent role to play in nurturing the individualism, creativity, problem-solving, and critical questioning skills that are basic to our concept of freedom.

To complicate the picture, Stoner noted, public faith in government has seldom been so low. "When people do not have faith in the ability of

schools or other agencies of government to deliver good value for their money, financial cutbacks are likely."

Voc. Ed. First to be Affected

Stoner felt that vocational education would be one of the first components of school curricula to be affected. Indeed, CETA, which was an $11 billion federal program in 1978, has already been slashed down to $3 billion. Even when funding was high, large research studies were being published showing that public schools and institutions were not doing and could not do the job, that vocational education should be handed over to community-based organizations and other private concerns. In Washington, it is clear that these findings have had an effect on the vocational education proposal submitted by the administration to Congress.

Stoner thought it worthwhile to take a look at the nature of vocational education today. Unfortunately, the definition of vocational education has not been changed since the federal law was passed in 1917, when having two years of post-high school education was rare. Because it has not been changed, vocational education is still thought of as training for entry-level jobs. This precludes recognition of the fact that, in today's expanded educational system, law degrees, superintendent's certificates, and M.D.'s are really vocational degrees.

The 1917 law also set up an evaluation system based solely upon the skills needed in the immediate job market. While this may still work for two-year, post-tech schools, Stoner questions its appropriateness for elementary and secondary programs. "You get a very different kind of vocational eduction when you gear your program toward the future employment needs of a nation, state, or community than you get when you gear it to the skills the manager of the local hardware store says he needs today," said Stoner.

Vocational education today is also stratified. Normal, bright youngsters are not supposed to major in it in high school. Vocational education teachers are segregated within school buildings and sometimes into separate buildings with the result that vocational education students are segregated from other students.

Vocational education is the program that is cut when the budget crunch comes down to school districts. A National School Boards Association (NSBA) survey showing that this is happening across the country has just been completed.

An NSBA task force has also found that in most secondary schools, vocational education is considered to be the job of the voc tech system. "This is particularly true in Wisconsin, the state people in Washington think of Wisconsin as the one with the superb post-secondary vocational education system," said Stoner.

Future Voc/Ed Issues

What then, Stoner asked, are the issues which will affect the future of vocational education? First of all, there must be a reauthorization of the Vocational Education Act in 1984.

There have been large federal revenue losses, only partially restored

by the $100 billion repair over the last three years. Defense spending increases of 10 percent over inflation and no cuts in Medicaid, Medicare, and Social Security means that programs like vocational education, ESEA Title I, Chapter 2, the consolidation grants, handicapped services, and many higher education programs will have to be cut.

New federalists plan to give about $28 billion in tax revenue sources back to the states and have them absorb about $30 billion in programs of which vocational education is one. "Those tax revenue sources will dry up in five years, however, and the states will become totally responsible for vocational education, school lunches, and sewer construction, among other programs. The Vocational Education Act, therefore, is crucial," Stoner warned.

Given its strong post-secondary program with clearly defined objectives, Wisconsin is uniquely qualified to identify appropriate missions and goals for elementary and secondary vocational education, and to put them into practice. "If anything unique is to be said in support of reauthorization of the Vocational Education Act from a state-practice point of view, it is going to have to come from Wisconsin," according to Stoner. "There has been some excellent thought on all this coming from the Wisconsin Department of Public Instruction and Wisconsin schools."

One obvious obstacle to the growth of the vocational education programs is declining enrollments in elementary and secondary schools which can translate into a decline in political power. A recent article in the Washington Post questioned allocation of 50 percent of JOBS Bill money to the young when 85 percent of the work force in the next 20 years will be composed of older adults. Stoner said a look at the two-to-one work force-to-dependent ratio indicates that youth are the most important resource this country has. "But unless we can begin to make this argument felt," she continued, "declining enrollments are going to mean loss of resources needed to build strong vocational education programs in elementary and secondary schools."

Money for the "Visibles"

Dwindling resources at the federal, state, and local levels can also create another problem. "When money is scarce, it is tempting to spend it on highly visible hardware, on a room full of computers, and forget about curriculum. That's an easy answer, but it is not adequate if vocational education is to be reshaped to meet tomorrow's needs," said Stoner.

Future vocational education programs must teach "generic vocational skills" which include a knowledge of different types of work sites and their rituals, an understanding of how work defines who a person is and how a society functions, problem-solving skills that have been tested to be useful in a variety of work-related situations, and basic math, reading, and writing skills taught and reinforced in the vocational disciplines. "Predictions are that the average worker will be reeducation four to five times in the next 20 years. Generic vocational skills can provide a solid foundation for that regular retraining," Stoner noted.

"Better use can and should be made of existing resources. With math and science skills becoming key competencies for the jobs of tomorrow, a new kind of teacher is required, one capable of converting expensive vocational education shops into learning laboratories that will teach students how to read and write, how to compute, and how to reason. This type of teacher must not feel that instruction in basic skills is someone else's responsibility," Stoner continued.

Leaders Needed

Stoner stressed the importance of programs that will train youth in elementary and secondary schools to become employers as well as employees. Sixty percent of the new jobs in the next decade will come out of small businesses, many of which have not yet been created. The vocational education system must teach youngsters to become leaders and creators.

"Vocational education should soon become a part of the regular curriculum for every student, "Stoner asserted, "but educators must avoid the political trap that is waiting if 100 percent of their students are run through the vocational education system as it now stands, teaching only entry-level skills with a few computer courses thrown in. In five years' time, there will be fewer jobs calling for entry-level skills and elementary and secondary schools will once more be accused of not doing the job. Financial resources will be allocated elsewhere."

Wisconsin now has the lead in creating a role for elementary and secondary schools in vocational education. "Keep it," Stoner urged. She recommended that Wisconsin educators work with business to determine what skills will be needed ten years from now, as well as immediately, and that they use school employees themselves as well as administrators in the formulation of goals and their implementation.

"Wisconsin is known as a place where people believe in the integrity of work," Stoner concluded. "I'm asking Wisconsin to help keep elementary and secondary vocational education viable in the coming years."